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10/693,984	10/28/2003	Takeshi Kimura	040302-0353	3973

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EXAMINER

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

1. This Office action is in response to Applicant's amendment filed July 12, 2006. Claims 26 and 32 have been amended. No claims have been added or canceled.
2. The indicated allowability of claims 1-25 is withdrawn in view of the newly discovered reference(s) to Friedrich et al.. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-are rejected under 35 U.S.C. 102(e) as being anticipated by Friederich et al. (US Patent No. 6,623,747).

Claim 1:

Friederich et al. discloses an information providing apparatus for a vehicle, comprising:

- a. a contact possibility information unit 60 configured to determine a contact possibility of the vehicle contacting with an object that is present in front of the vehicle

according to relative motion between the vehicle and the front object, the contact possibility information unit providing contact possibility information by changing at least one of the driving force and the braking force of the vehicle according to the contact possibility (col. 4, lines 7-31);

b. a driver intention detector 20 configured to detect a driving intention of a driver of the vehicle, the driver intention detector detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing (col. 3, lines 55-63); and

c. a controller 60 configured to modify at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detector ;

d. wherein the controller is configured to modify the at least one threshold to delay the timing of providing the contact possibility information (col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.)

Claim 2:

In Friederich, the driving intention is that the driver intentionally brings the vehicle closer to the front object when the vehicle is driven in a steady state.

Claim 3:

In Friederich, the driver intention detector detects a lane change (col. 4, lines 49-53) of the vehicle as the intention of the driver in intentionally bringing the vehicle closer to the front object.

Claim 4:

Controller 60 delays the timing of providing the contact possibility information in a case where the front object is in a lane to which the vehicle is going to change its lane (col. 4, lines 49-53).

Claim 5:

In Friederich, in a case where the driver intention detector detects that the driver is intentionally bringing the vehicle closer to the front object with the vehicle in a steady driving state, the controller reduces a control value to change the driving force or braking force.

Claim 6:

In Friederich, in a case where the driver intention detector detects that the driver is intentionally bringing the vehicle closer to the front object with the vehicle in a steady driving state, the controller reduces a control value to change the driving force or braking force.

Claim 7:

The relative motion in Friederich includes a relative speed between the vehicle and the front object; and in a case where the driver intention detector detects that the driver is intentionally bringing the vehicle closer to the front object with the vehicle being in a steady driving state, the controller changes a control value of at least one of the driving force and braking force according to the relative speed. Col. 4, lines 47 to col. 5, lines 67.

Claims 8-14:

Controller 60 releases the modification after a predetermined time.

Claim 18:

Friederich discloses an information providing apparatus for a vehicle, comprising:

- a. contact possibility information means 60 for determining a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to relative motion between the vehicle and the front object, the contact possibility information means providing contact possibility information by changing at least one of the driving force and braking force of the vehicle according to the contact possibility (col. 4, lines 7-31);
- b. driver intention detecting means 20 for detecting a driving intention of a driver of the vehicle, the driver intention detecting means detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing; and
- c. controlling means 60 for modifying at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detecting means 20;
- d. wherein the controlling means is configured to modify the at least one threshold to delay the timing of providing the contact possibility information (col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.)

Claim 19:

The rejection of claim 19 recites the rejection of claim 1, except it is a method claim.

Claim 20:

Friederich discloses an information providing apparatus for a vehicle, comprising:

- a. contact possibility information means 60 for determining a contact possibility of the vehicle contacting with an object that is present in front of the vehicle according to

relative motion between the vehicle and the front object, the contact possibility information means providing contact possibility information by changing at least one of the driving force and braking force of the vehicle according to the contact possibility (col. 4, lines 7-31);

b. driver intention detecting means 20 for detecting a driving intention of a driver of the vehicle, the driver intention detecting means detecting at least a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing; and

c. controller 60 for modifying at least one threshold for providing the contact possibility information according to a detection result provided by the driver intention detecting means 20;

d. wherein the controller is configured to track a predetermined amount of time when the driver intention detector detects a driving intention of the driver that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the front object is increasing;

e. wherein the controller is configured to determine if the predetermined amount of time has elapsed, wherein if the predetermined amount of time has elapsed the threshold is no longer modified, and wherein if the predetermined amount of time has not elapsed the threshold remains modified.

Col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.

Claim 22:

In the Friederich's system, the driver intention detector 20 detects a lane change of the vehicle as an intention of the driver in intentionally bringing the vehicle closer to the front object; and the controller is further configured to determine if the object is also changing lanes after the controller determines that the predetermined amount of time has not elapsed, wherein if the object is changing lanes the threshold is not modified, and wherein if the object is not changing lanes the threshold is modified.

Claim 26:

Friederich discloses a controller for a host vehicle which has an object detecting unit that detects an object ahead of the host vehicle, the controller comprising:

- a. a processor 60 that is adapted to calculate a counterforce of a virtual member in front of the host vehicle which provides feedback to a driver of the host vehicle based on a relationship between the host vehicle and an object ahead of the host vehicle;
- b. wherein the processor 60 is configured to delay the timing of providing the feedback to the driver when an intention of the driver is detected. Col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.

Claim 27:

In Friederich's system, the processor 60 is configured to delay the timing of providing the feedback to the driver by reducing a length of the virtual member.

Claim 28:

The processor 60 is configured to delay timing of providing feedback to the driver when an intention of the driver is detected that the driver is driving the vehicle in recognition that the possibility of the vehicle contacting the object is increasing.

Claim 29:

The processor 60 delays the timing of providing contact possibility information in a case where the object is in a lane to which the vehicle is going to change its lane.

Claim 32:

Friederich discloses a controller for an own vehicle which has an object detecting unit that detects an object ahead of the own vehicle, comprising a processor 60 that is adapted to calculate a counterforce of a virtual member in front of the own vehicle which provides feedback to a driver of the own vehicle based on a relationship between the own vehicle, an object ahead of the own vehicle and an intention of the driver. Col. 4, lines 7-31; col. 4, lines 47 to col. 5, lines 67, esp. col. 5, lines 20-23.

Claim 33:

The processor 60 detects a lane change of the vehicle as the intention of the driver.

Claim 34:

The processor 60 detects a lane change of the vehicle as the intention of the driver.

Allowable Subject Matter

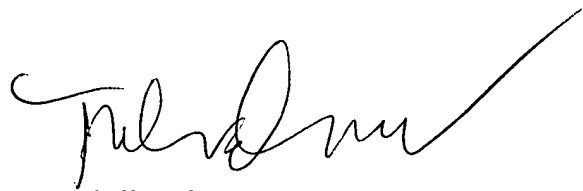
5. Claims 15-17 and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 23-25 are allowed.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Lieu whose telephone number is 571-272-2978. The examiner can normally be reached on MaxiFlex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Art Unit 2612

Sept 28, 06